How much salt is too much?

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| Learning Objectives | |
| Criteria D – Scientific Inquiry | Judge the validity of a hypothesis based on the outcome of the investigation |
| Suggest improvements to the method or further inquiry when relevant |
| Collect and record data |
| Criteria E – Processing Data | Draw conclusions consistent with the data and supported by scientific reasoning |
| Analyze and interpret data |
| Organize and present data using numerical and visual forms |

Your task is to put together a lab report following the handout provided to you. The lab report should include the information gathered from your observations of the plant growth. Be sure to hand in the lab report complete with a data table and graph showing how the salt concentration affected the plant growth for each of the six plants.

Within the evaluation of the lab report address the following:

1. Explain whether your hypothesis was supported by your observations.
2. What were some problems that you encountered in this experiment? How could they be overcome?
3. A reliable scientific result is one that can be repeated using the same conditions. Would you consider this lab to have reliable results? Why?

Within the conclusion of the lab address the following:

1. In what way did the salt effect the growth of your plant?
2. Using the groups data how did the varying levels of salt concentration affect the plants?
3. Using your scientific understanding of mangrove adaptations explain what should have happened to the plants with the various levels of salt water concentrations.

**Criterion D – Scientific Inquiry**

**Achievement Level**

Descriptor

**0**

The student does not reach a standard described by any of the descriptors below.

**1-2**

With guidance - You are able to make **an attempt** at explaining whether the hypothesis was supported. In your evaluation you **attempt to** address whether the lab could have been improved upon.

**3-4**

With guidance - You are able to **explain** whether the hypothesis was supported but in a **limited way**. In your evaluation you are able to **address** whether the lab could have been improved upon with regards to problems encountered and reliability.

**5-6**

With guidance - You are able to **explain** whether the hypothesis was supported and **provide reasons** why you think so. In your evaluation you are able to **explain** whether the lab could have been improved upon with regards to problems encountered and reliability also to **suggest improvements** to the method.

**Criterion E – Processing Data**

**Achievement Level**

Descriptor

**0**

You do not reach a standard described by any of the descriptors below.

**1-2**

With guidance - You are able to make a **reasonable effort** present your data in a **simple results table**, and make some attempt to draw a **simple type of graph**. You **attempt to comment** on how the salt water affected the growth of your plant. You **attempt to say** how the salt concentrations of the various groups affected the plant growth, but it likely does not show a proper interpretation of the data.

**3-4**

With guidance - You are able to make a **reasonable effort** to present your data in a **suitable table** and draw a **suitable graph**. You are able to **describe almost correctly** how the salt water affected the growth of your plant and how the salt concentrations of the various groups affected the plant growth, but your interpretation of the data is **limited or incorrect**.

**5-6**

With guidance - You are able to present your data in a **suitable table** and draw a **suitable graph**. You are able to **describe correctly** how the salt water affected the growth of your plant and how the salt concentrations of the various groups affected the plant growth. You are able to **explain correctly** how the salt water concentrations should have affected the plant growth in regards to the adaptations of the mangroves.